

1 ASSOCIATING MULTI-LINGUAL AUDIO RECORDINGS WITH OBJECTS
2 IN INTERNET PRESENTATION

3 **FIELD OF INVENTION**

4 The present invention relates to Internet systems enabling
5 conferences and presentations by means of charts or slides
6 accompanied with audio recordings to audiences anywhere in
7 the world. More particularly, it relates to associating
8 multi-lingual audio-recordings with visual objects in an
9 Internet presentation system.

10 **BACKGROUND**

11 Today, audiences including thousands of participants in the
12 world can attend conferences and presentations broadcast by
13 the Internet network. During such a presentation, the
14 participant can view visual objects such as charts, slides,
15 images, graphics (generally in PowerPoint) and listen to
16 prerecorded audio recordings associated with each visual
17 object.

18 In general, the speaker who is in charge of adding audio
19 comments to the visual object, does not assemble the final
20 deliverable contents but could, via access to the Internet
21 web pages, invoke the assembly process. The assembly is
22 normally done by a third party who has the skills in
23 creating the synchronized objects or an automatic system.

1 But there are many problems associated with creating a
 2 presentation having a synchronized audio recording to the
 3 visual objects. Thus, the speaker must have a ready access
 4 to equipment like a recording machine, a microphone or a PC
 5 with audio support to create the recording. An alternative
 6 is to go to a recording studio and to use facilities there,
 7 but this is not always immediately available and it is an
 8 expensive solution. If the user chooses to use a tape
 9 recorder, the third party which receives this media must
 10 have a similar equipment available to replay the recording.

11 Associating the audio recordings with the objects is also a
 12 problem. Indeed, the objects to which the audio files are
 13 associated, normally follow some sequential numbering
 14 scheme. However, there may not be sequential audio
 15 recordings due to some objects not requiring audio or the
 16 objects are not sequential. The speaker who is the person
 17 defining which objects require audio has to provide explicit
 18 documentation on the association. Such a manipulation being
 19 manually performed, the process can be subject to errors.

20 Ensuring that each audio recording is correctly associated
 21 with the visual objects requires that the people in charge
 22 of the association must be familiar with the language used
 23 or have very explicit instructions in their native language
 24 to correctly associate the audio recordings with the
 25 objects. The third party may be associating more than one
 26 language to a single object. If the recording is not
 27 pre-edited into segments, it requires editing and therefore

an expertise in the language spoken by the speaker is required.

SUMMARY OF THE INVENTION

Accordingly, an aspect of the present invention is to provide an Internet presentation system enabling the user to make audio recordings associated respectively with the visual objects of the presentation whatever the language used in the audio recording.

The invention provides methods of associating multi-lingual audio recordings with visual objects in a presentation system accessed by the Internet network. A plurality of visual objects such as charts or slides controlled by a third party in a server can be accessed by any user of the Internet network. The visual objects are each associated with an audio recording in any language selected amongst several predetermined languages.

An example embodiment of a method of the present invention comprises the steps of calling the third party audio recording server by the user in charge of the audio recording associated with a visual object via the Public Switched Network, prompting the user to enter his user ID; and transmitting by the keypad of the telephone a user ID including a first part defining a first language to be used for recording the audio recording.

BRIEF DESCRIPTION OF THE DRAWINGS

1 The above and other aspects, features and advantages of the
2 invention will be better understood by reading the following
3 more particular description of the invention in conjunction
4 with the accompanying drawings wherein :

5 Fig. 1 is a block-diagram representing a general context
6 wherein the invention is implemented;

7 Fig. 2 is a block-diagram of an example of functional means
8 used by a third party to implement the invention;

9 Fig. 3 is an example of a schematic diagram showing the
10 recording of two audio files in English and in French by the
11 system of the invention; and

12 Fig. 4 represents an example of a flow chart of the
13 different steps used in a method according to the invention.

14 DETAILED DESCRIPTION OF THE INVENTION

15 The present invention provides methods, apparatus and
16 systems for associating multi-lingual audio recordings with
17 visual objects in a presentation system accessed by the
18 Internet network, wherein a plurality of visual objects such
19 as charts or slides controlled by a third party in a server
20 can be accessed by any user of the Internet network. The
21 visual objects being associated each with an audio recording
22 in any language selected amongst several predetermined
23 languages.

An example embodiment of such a method comprises the steps of calling the third party audio recording server by the user in charge of the audio recording associated with a visual object via the Public Switched Network, prompting the user to enter his user ID (which will determine the language of subsequent voice prompts); and transmitting by the keypad of the telephone a user ID including a first part defining a first language to be used for recording the audio recording.

Then, the user can enter his password and proceed to make audio recordings in the chosen language. He selects the chart or object he wants to make a recording for and makes a recording. He can replay that recording at anytime and re-record the audio if not satisfied. On completion of the recordings, the user then initiates an automatic update process which automatically synchronizes the audio recordings to the visual objects.

Assuming that the third party responsible for the presentation system has got the charts or slides to be presented to customers connected to the Internet network, a speaker (called the user in the following) has to record audio files each being associated with each chart or slide.

As illustrated in Fig. 1, the user has at his disposal a workstation 10 connected to the Internet network 12 and a telephone set 14 connected to the Public Switched Network (PSN) 16. The third party server 18 including the charts slides or objects in general which can be broadcast to

customers by the Internet network 12 is also connected to PSN 16.

Prior to using the presentation system, the user is provided with a user identification number ID, a password and a telephone number (via web pages, e-mail or conversation with the third party). When the user wants to record the audio recordings, he calls the third party server 18. At this time, the user is prompted to enter his ID by means of the keypad on his telephone 14. Note that this voice prompt can be in multiple languages. As illustrated by the block-diagram of Fig. 2, the ID 20 is processed in the server by a processing unit 22 which represents the sophisticated facilities (hardware and software) of the server to control and manage the system.

The ID entered by the user determines the language to be used, the naming convention for the file and the location for the stored recordings. In general the third party has stored the objects for which audio is to be recorded in the same location as that specified by the ID in a directory 23, or the user through an automated process will place the objects into the location specified within the ID. Thus, for example, the ID may contain the number 6666 which is the directory name in which the final recordings are to be stored.

On receiving the ID, processing unit 22 determines the language in which it must prompt the user and the file naming convention it must use to store the audio recordings. For example, the ID could be 366661 meaning that the

directory number is 6666 and the language code is 31. Note that the number 31 could be placed at the beginning or at the end of ID entered by the user. With this language code, the processing unit 22 determines in a language table 24, which is the language will be used to prompt the user and the file naming language used for the recording.

When processing unit 22 has determined the language to be used and after the user has entered the number of the visual object associated with the audio recording, it generates a file number 26 to designate the recording file to be stored in a data base 28. In the example, such a file number could be 6666:engxx wherein 6666 is the directory name, eng corresponds to the language "English" corresponding to language code 31 in table 24 and xx is the number of the chart or slide with which the recording is to be associated.

After that, the user can record the audio recording which is stored in data base 28 in a file having the file number 26 as defined above. The processing unit also writes a flag (one bit) at the end of the file for indicating that it is a new recording which will need to be copied in directory 23. The copying operation is achieved by the processing unit when the user requests an "update" as explained below.

Referring to Fig. 3, it is shown how the language code included in the ID entered by the user is an essential feature of the invention. As a matter of fact, with a first language code, the processing unit determines in the language table that English has to be used for the recording. Using the file naming convention, the processing

unit defines a file number 32 for example 6666:engxx. This number is used to record the English recording 34 in a first location of the data base 28. But, assuming that French is now the language to associate with the same chart or slide, a different file number 36, for example 6666:frexx, is defined by the processing unit for the new recording. Then, this number will be used as file number to record the French recording 38, and to store this file into another location of data base 28. Whatever language is used, the different recordings corresponding to the same presentation will be then copied in directory 23 at the location defined by the same directory name, 6666 in the example.

Now, the process according to the invention is described in reference to Fig. 4. After inputting the system (step 40) by calling the third party via the Public Switched Network, the user transmits his user ID (step 42). As explained above, the processing unit of the server determines the language to be used (step 44) and the directory in which the recording has to be copied (step 46). Then, the user has to enter a password (step 48) which is used to determine whether he is a valid user of the ID.

After that, the user has to decide whether he wants to "update" that is to copy recordings already stored from the data base to the directory determined in the ID (step 50). If so, the user is disconnected (step 52). Such a disconnection is necessary since, during the copying process which takes a short time (about 30-45 seconds) the user cannot make any changes to the recordings. If the user calls back immediately, it can be expected that, by the time he

1 has entered the ID and the password, the copying process
 2 will be completed. Note that the recordings have a flag
 3 which is set to 1 when they are recorded, are reset to 0
 4 after they are copied into the directory so that only the
 5 recordings having a flag set to 1 are copied which reduces
 6 considerably the work load on the system.

7 Then, it is determined whether the user has a chart to be
 8 recorded (step 54). If not, the connection was only to
 9 update the existing recordings and the process is exit (step
 10 56). If there is at least a chart to be audio recorded, the
 11 user enters the chart number (step 58). It must be noted
 12 that the message to be entered is generally split into 3
 13 parts wherein the chart number can be part 2 followed by
 14 instructions or the instructions can be in part 1 and part 3
 15 is a blank recording, depending upon the language which is
 16 used.

17 Generally, at this stage, the user is prompted by the system
 18 to know whether he wants to listen to a previous recording
 19 or to have a continuous playback of the already recorded
 20 audio files (step 60). The feature of continuous playback is
 21 to allow the user to hear if there is a continuity between
 22 the recordings. This is a valuable productivity aid for the
 23 user since he does not have to select the next chart and
 24 more valuable when there are multiple recordings since it is
 25 a way of easily finding missing recordings in a sequence of
 26 recordings. In the latter case, the system states that no
 27 recording exists and can prompt the user if he wants to
 28 record one.

1 Then, it is determined whether a recording exists for the
2 chart number entered by the user (step 62). If not, the user
3 is prompted to start the audio recording (step 64) which
4 will be stored in the data base with the file number defined
5 from the ID as previously explained. Again, the user may be
6 requested to listen to the recording or to playback all the
7 recordings (step 66). As the user may be not entirely
8 satisfied with the recording, it is determined whether he
9 wants to make a re-recording (step 68). If not, the process
10 is looped to the beginning before the update (step 50).

11 Assuming that there is already a recording corresponding to
12 the chart number entered by the user, the same way as
13 previously, it is determined whether the user wants to make
14 a re-recording (step 70). If it is the case or if after
15 recording the audio file, the user is not satisfied (see
16 step 68), the user may start to re-recording (step 72).
17 Again, the user may generally listen to his re-recording or
18 make a continuous playback of the recordings (step 74). Of
19 course, when the user does not want a new recording after
20 the first recording, he does not start re-recording and this
21 step is jumped. Then, the process loops to the beginning
22 before the update (step 50).

23 It must be noted that the user can all the time have access
24 to the system for returning to the "update" step or change
25 any one of the recordings by calling again the third party,
26 entering the ID and then the password. For practical
27 purposes, there could be a time limit set on access time.

1 When a recording is changed afterwards, the flag is also set
2 to 1 in the audio file so that only this recording will be
3 copied from the data base to the directory.

4 When recording an audio file for a chart or slide, the
5 synchronization between this one and the audio recording is
6 automatically achieved. When the chart or slide will be
7 displayed to a presentation participant, it will be
8 displayed during all the time of the audio recording. In
9 other words, the same chart is synchronized with the
10 recordings corresponding to the different languages.
11 However, the presentation has always the option to stop the
12 audio playing or to go quickly to the next chart.

13 Although the system is used today for producing an audio
14 recording that is associated with a slide or chart, it is
15 not limited to producing audio recordings for only this
16 purpose. Many objects (slides, text, html pages, animation
17 etc.), today require narration or audio, the addition of
18 audio to one of these objects, to enhance the end user
19 experience by being able to see the objects and at the same
20 time have a supportive audio track. So, as technology
21 changes, then this equipment can be used in support of
22 newspaper articles, where you hear the reader etc. Also, as
23 the web moves to encompass those users with physical
24 disabilities, there is a need to produce audio versions of
25 visible text or objects. The system could be used to record
26 these. Similarly, the final delivery medium may not be the
27 Internet, it could be a CD, diskette, be stored on a server
28 and accessed by other means.

1 program code means for causing a computer to effect the
 2 steps of a method of this invention. Similarly, the present
 3 invention may be implemented as a computer program product
 4 comprising a computer usable medium having computer readable
 5 program code means embodied therein for causing a a function
 6 described above. The computer readable program code means
 7 in the computer program product comprising computer readable
 8 program code means for causing a computer to effect one or
 9 more functions of this invention. Furthermore, the present
 10 invention may be implemented as a program storage device
 11 readable by machine, tangibly embodying a program of
 12 instructions executable by the machine to perform method
 13 steps for causing one or more functions of this invention.

14 It is noted that the foregoing has outlined some of the more
 15 pertinent objects and embodiments of the present invention.
 16 This invention may be used for many applications. Thus,
 17 although the description is made for particular arrangements
 18 and methods, the intent and concept of the invention is
 19 suitable and applicable to other arrangements and
 20 applications. It will be clear to those skilled in the art
 21 that modifications to the disclosed embodiments can be
 22 effected without departing from the spirit and scope of the
 23 invention. The described embodiments ought to be construed
 24 to be merely illustrative of some of the more prominent
 25 features and applications of the invention. Other
 26 beneficial results can be realized by applying the disclosed
 27 invention in a different manner or modifying the invention
 28 in ways known to those familiar with the art.